

Date: Friday, 05/01/2007 11:31:01 AM
 User: Linda Laclele

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: HIGH AFT X-TUBE 412			
Job Number	: 30190	Part Number	: D412664203			
Estimate Number	: 10559	Drawing Number	: D412-664-243 REV C			
P.O. Number	: N/A	Project Number	: N/A			
This Issue	: 05/01/2007	S.O. No.	: N/A			
Prsht Rev.	: NC	Drawing Revision	: C			
First Issue	: N/A	Material	: N/A			
Previous Run	: 30189	Due Date	: 15/02/2007	Qty:	1	
Written By	: [Signature]					Um: Each
Checked & Approved By	: [Signature]					
Comment	Est Rev:E 04.02.16 Reformat; Added D3189-1 K/DS Est Rev:F 06-03-29 Remove Coments on Pick List JLM est rev G 06.12.08 per ECN 886 EC					

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	DC	DOCUMENT CONTROL	[Barcode]
		Comment: DOCUMENT CONTROL Photocopy bluefile and create labels as per PPP D412-664-203 CHG 005	KJ 07.01.05
2.0	D6009129	Crosstube Material	[Barcode]
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part number Description Batch 1 D6009-129 Crosstube 25168 Check OD = 3.500"; ID = 2.250"	M8 07/01/06
3.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE	[Barcode]
		Comment: MORI SEIKI CNC LATHE LARGE 1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA166 2-Turn first side as per Folio FA166 3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243.	TSG 07.01.16
4.0	QC1	INSPECT ALL DIM TO DIM SHEET	[Barcode]
		Comment: INSPECT ALL DIM TO DIM SHEET	TSG 07.01.16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:01 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #:	Machine Or Operation:	Description :
5.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
<p>Comment: MORI SEIKI CNC LATHE LARGE</p> <p>1-Turn second side as per Folio FA166</p> <p>2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243.</p> <p>3- Remove sand and plugs</p> <p>4-Scribe part # and batch # using vibrating stylus as per Dwg D412-664-243 engrave on outside of tube)</p> <p>Inside of Cuff(Donot</p> <p>3G 07.01.10</p>		
6.0	QC1	INSPECT ALL DIM TO DIM SHEET
<p>Comment: INSPECT ALL DIM TO DIM SHEET</p> <p>3G 07.01.10</p>		
7.0	QC8	SECOND CHECK
<p>Comment: SECOND CHECK</p> <p>SD 07.01.10</p>		
8.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
<p>Comment: LANDING GEAR RESOURCE 1</p> <p>1-Polish entire outside surface of crosstube</p> <p>JP 07-1-11</p>		
9.0	QC5	INSPECT WORK TO CURRENT STEP
<p>Comment: INSPECT WORK TO CURRENT STEP</p> <p>JP 07-1-11</p>		
10.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
<p>Comment: HAND FINISHING RESOURCE #1</p> <p>Chemical Conversion Coat as per QSI 005 4.1</p> <p>JP 07-1-15</p>		
11.0	QC3/5	INSPECT WORK/WING WALK
<p>Comment: Inspect work & Chemical conversion Coat</p> <p>JP 07-1-16</p>		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:01 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #: Machine Or Operation:

Description :

12.0 BENDING BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D412-664-243 using CNC bender program 412-af and Folio FT010

BT / EL 7-1-16

13.0 QC6 DIMENSIONAL CHECK

QC15



Comment: DIMENSIONAL CHECK

14.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551

2-Ream hole to finish size in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243

BT 07-01-22

15.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

BT / EL 07-01-22

16.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BT / EL 07/01/22

17.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BT / EL 07/01/22

18.0 OUTSIDE SERVICE OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 2915 LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

C 207/01/23 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07-01-17	BD	QC 15 required. Perm. Change <i>J</i>				<i>J</i> 07-01-17	<i>J</i> 07-01-17

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:01 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #:	Machine Or Operation:	Description :
19.0	PACKAGING 1	PACKAGING RESOURCE #1
		Comment: PACKAGING RESOURCE #1 Inspect for transit damage Ensure copy of NDT results attached to work order. <i>PL 7/1/27 (1)</i>
20.0	QC5	INSPECT WORK TO CURRENT STEP
		Comment: Inspect for damage & ensure results are as per Dwg D412664-203 <i>PL 07/01/31</i>
21.0	SPRAY PAINTING	SPRAY PAINTING
		Comment: SPRAY PAINTING 1-Prime inside and outside crosstube as per QSI 005 4.2 <i>PL 07/02/01 (1)</i> 2-Paint outside crosstube with White Imron as per QSI 005 4.2 <i>PL 07/02/01 (1)</i>
22.0	QC14	Inspect Spray Paint
		Comment: Inspect Spray Paint Wrap in plastic bag to protect from scratches <i>PL 07/02/12 (1)</i>
23.0	D2856600	Abrasion Strip
		Comment: Qty.: 1.7640 f(s)/Unit Total : 1.7640 f(s) Pick: Qty Part number Description Batch 2 D2856-600(Cut to 10.090") Abrasion Strip <i>B26650 PL 07-02-21</i>
24.0	D28961	Support
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part number Description Batch 1 D2896-1 Support <i>29705 PL 07-02-21</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:02 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #:	Machine Or Operation:	Description :
25.0	D31891	Chafing Shield



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part number	Description	Batch
2	D3189-1	Chafing Shield	27190 RT 07-02-21

26.0	MS2192028	Clamp(per MIL-DTL-8783C)
------	-----------	--------------------------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty	Part number	Description	Batch
4	MS21920-28	Clamp	m101b84 RT 07-02-21

27.0	MS2192032	clamp(per MIL-DTL-8783C)
------	-----------	--------------------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

clamp(per MIL-DTL-8783C)
batch: 102931

RT 07-02-21

28.0	D2732	Rubber Extrusion
------	-------	------------------



Comment: Qty.: 1.0290 f(s)/Unit Total : 1.0290 f(s)

Rubber Extrusion

Cut qty 2 5.80" long

qty	part #	description	batch
2	D2732-058	rubber cushion	B26472 RT 07-02-22

29.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
------	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

Assemble as per Dwg D412-664-203

RT 07-02-21

Instal support with magnobond 6398 per dwg D412-664-203,
cure for 12hrs before packaging.

RT 07-02-22

Time & date of application: 8:00 AM 11:00 RT 07-02-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:02 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #:	Machine Or Operation:	Description :
30.0	QC5	INSPECT WORK TO CURRENT STEP <i>J0702-270</i>
Comment: INSPECT WORK TO CURRENT STEP		
31.0	PACKAGING 1	PACKAGING RESOURCE #1 <i>Packaging Kit</i>
Comment: PACKAGING RESOURCE #1		
32.0	AN640A	Bolt <i>M19714</i>
Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)		
33.0	AN641A	Bolt <i>M101418</i>
Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)		
34.0	AN960JD616	Washer <i>M102829</i>
Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)		
35.0	MS21042L6	Nut <i>M100151</i>
Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)		
36.0	QC4	INSPECT 100% KITS FOR COMPLETENESS <i>Spab2/80</i>
Comment: INSPECT 100% KITS FOR COMPLETENESS		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA:  Date: 07/03/01
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 05/01/2007 11:31:02 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 30190

Part Number: D412664203

Job Number:



Seq. #:	Machine Or Operation:	Description :
37.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-664-203

*****Ensure tube is not packaged if curing time is less than 12 hrs, see step 27 for application time & date

Time & date of packaging: 07/02/08 3 h 15

Location: _____
PPP Rev: F

FINAL INSPECTION/W/O RELEASE



(1)

07/03/08

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



6/02/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	30190
Description: Crosstube Assembly (412 High Aft)	Part Number:	D412-664-243
Inspection Dwg: D412-664-243 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.684	+0.005/-0.000	2.677	✓		
	2.748	+0.005/-0.000	2.754	✓		
	2.884	+0.005/-0.000	2.888	✓		
	3.019	+0.005/-0.000	3.023	✓		
	3.163	+0.005/-0.000	3.167	✓		
	3.308	+0.005/-0.000	3.312	✓		
	3.429	+0.005/-0.000	3.433	✓		
	2.990	+0.005/-0.000	2.993	✓		
	2.618	+0.005/-0.000	2.622	✓		
	0.200	+/-0.010	.200	✓		
	R0.063	+/-0.010	.063	✓		
	R0.500	+/-0.010	.500	✓		
	4.971	+/-0.001	4.971	✓		
SIDE B	2.684	+0.005/-0.000	2.688	✓		
	2.748	+0.005/-0.000	2.752	✓		
	2.884	+0.005/-0.000	2.888	✓		
	3.019	+0.005/-0.000	3.023	✓		
	3.163	+0.005/-0.000	3.167	✓		
	3.308	+0.005/-0.000	3.312	✓		
	3.429	+0.005/-0.000	3.433	✓		
	2.990	+0.005/-0.000	2.993	✓		
	2.618	+0.005/-0.000	2.622	✓		
	0.200	+/-0.010	.200	✓		
	R0.063	+/-0.010	.063	✓		
	R0.500	+/-0.010	.500	✓		
	4.971	+/-0.001	4.971	✓		
	124.09	+/-0.020	124.09	✓		

Measured by:	BS	Audited by:	SA	Prototype Approval:	N/A
Date:	07.01.10	Date:	07.01.10	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.06.16	New Issue (P/O D412-664-203)	KJ/JLM	
B	06.03.09	Dwg Rev updated	KJ/JLM	JL/JL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>PH</i>	DRAWN BY <i>AB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>AB</i>	DRAWING NO. D412-664-243	REV. C SHEET 1 OF 3
DATE 06.10.27		TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE NTS
A	01.10.17	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	
C	06.10.27	REMOVE D2856-600-1087, ADD D2732-058 & MAGNOBOND 6398 MS21920-32 WAS MS21920-30	

RELEASED

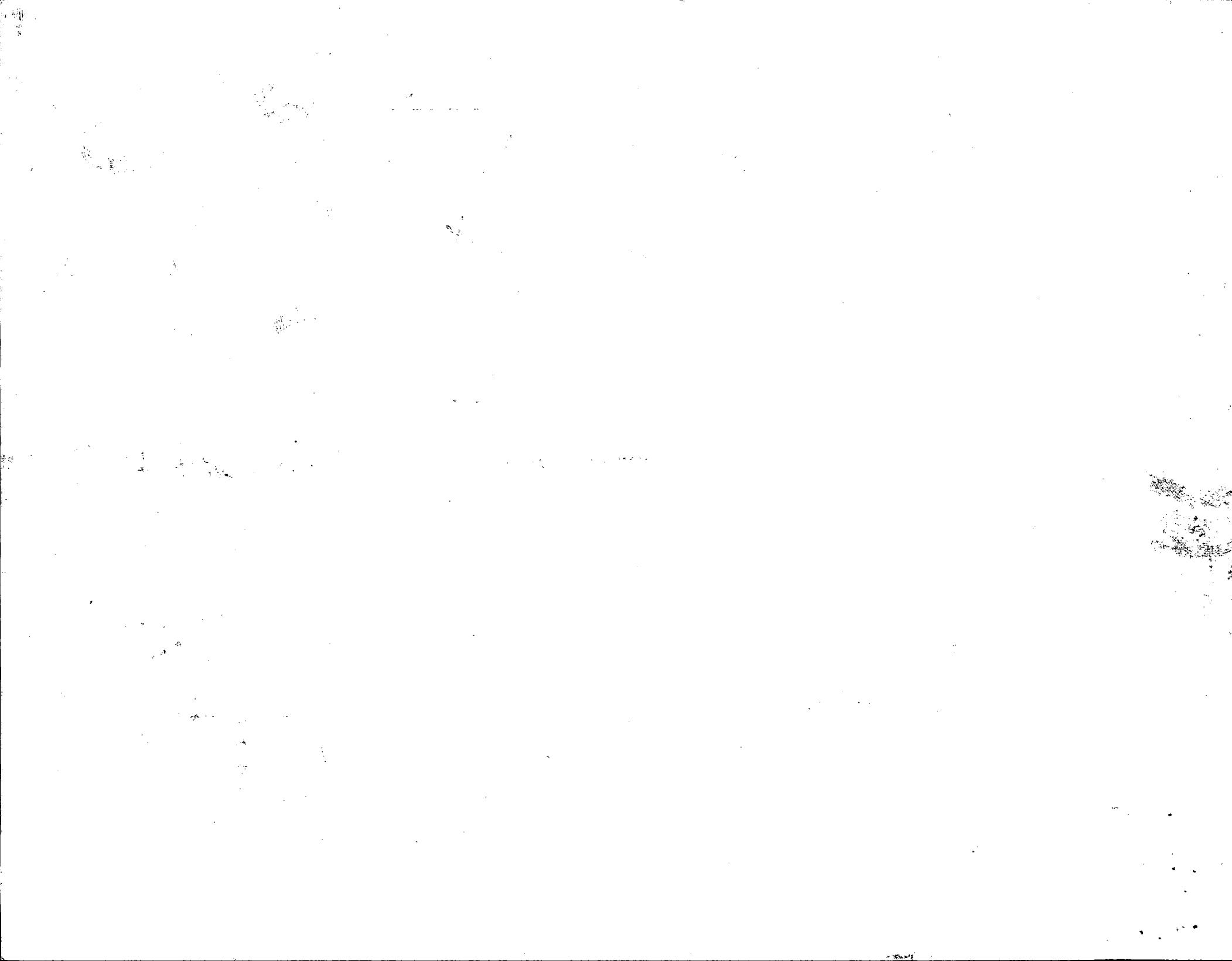
06.10.27 *AB***PARTS LIST:**

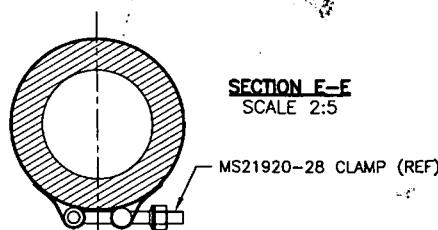
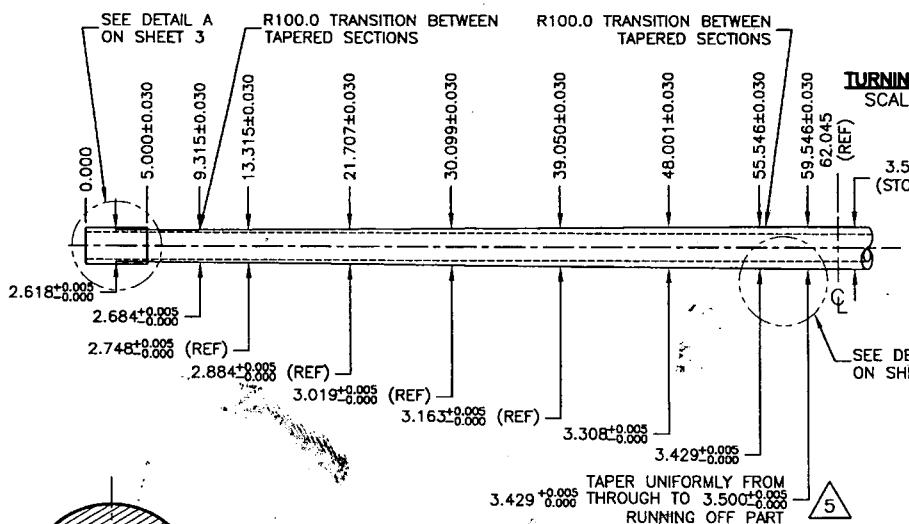
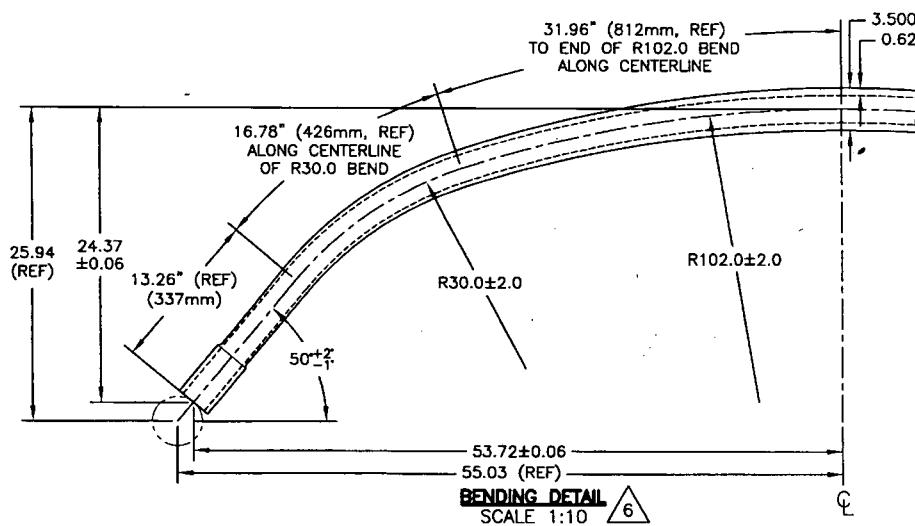
Qty	Part Number	Description
X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
1	D6009-129	CROSSTUBE
2	D2732-058	RUBBER CUSHION
1	D2896-1	SUPPORT
2	D2856-600-1009	ABRASION STRIP
4	MS21920-28	CLAMP
2	MS21920-32	CLAMP
2	D3189-1	CHAFING SHIELD
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6009-129
FINISHED LENGTH = 124.09 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8-PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR PACKAGING.
- 12) INSTALL MS21920-32 CLAMPS WITH D2732-058 RUBBER CUSHIONS TO SECURE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *30190*





SHOP COPY
RETURN TO
ENGINEERING
COPY
INCONTROLEI
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. **30170**

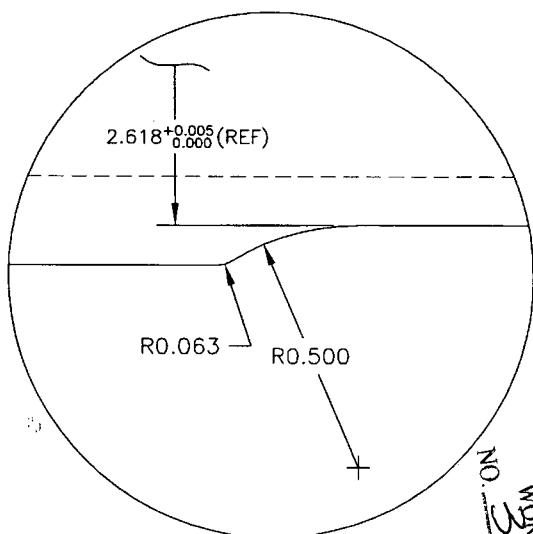
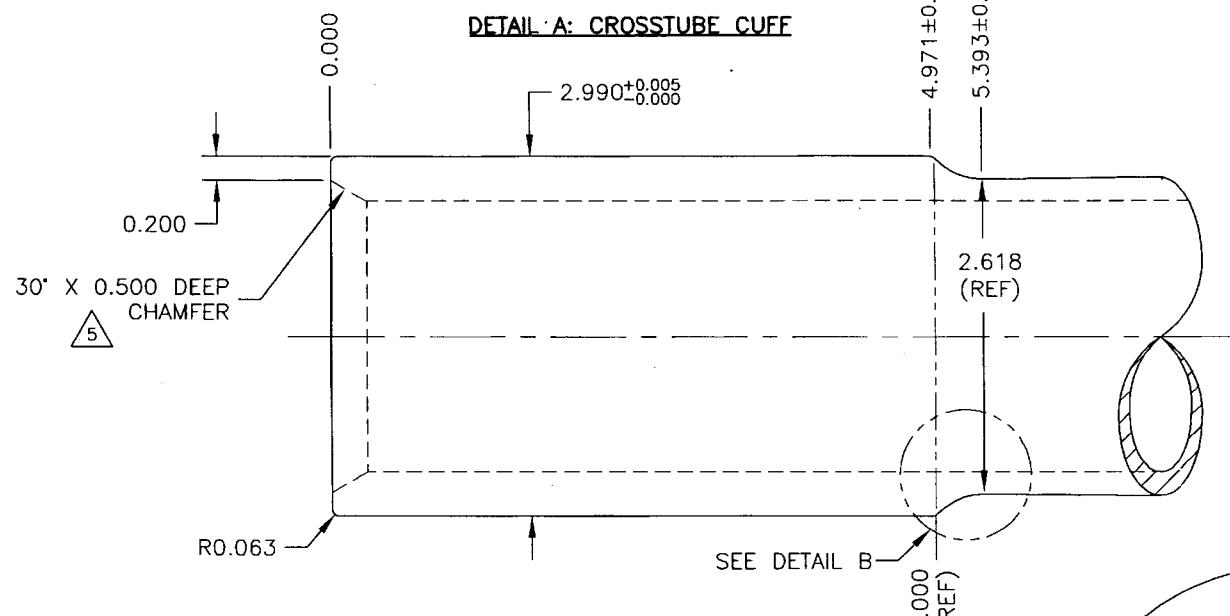
**VIEW D-D:
CUFF DETAIL**
SCALE 2:5

COPYRIGHT © 2001 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.

DESIGN PH	DRAWN BY BS	DART	
CHECKED PH	APPROVED JH	DRAWING NO. D412-664-243	REV. C
DATE 06.10.27	TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	SHEET 2 OF 3	SCALE 1:10

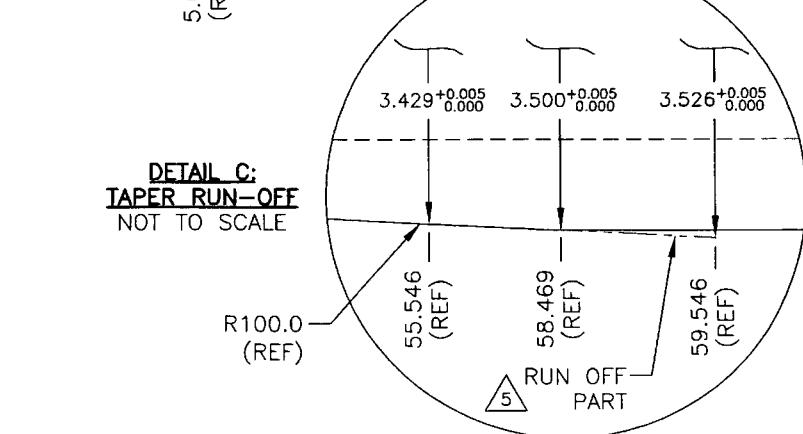
RELEASED
06.11.28



DETAIL B: CUFF TRANSITION
SCALE 4:1

NO. 3010

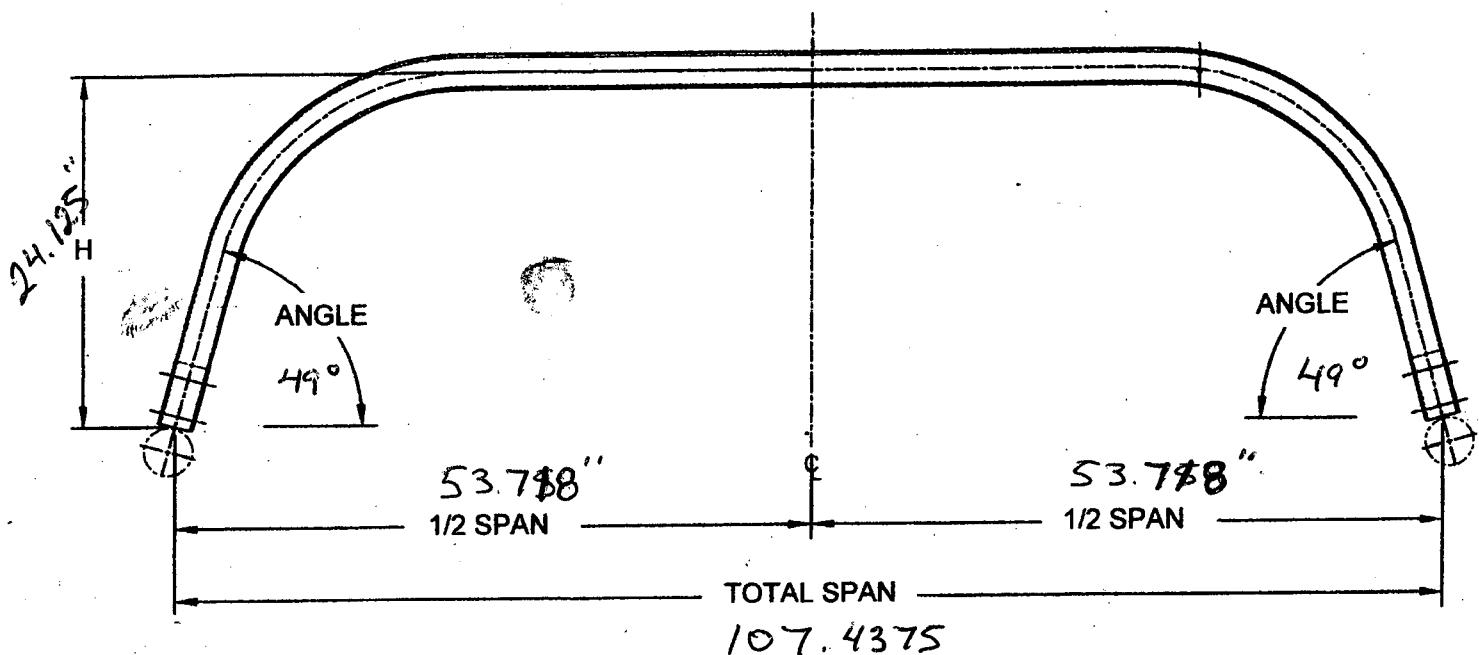
WORK ORDER SUBJECT TO AMENDMENT
WITHOUT NOTICE
UNCONTROLLER COPY
ENGINEERING COPY
RETURN TO



DESIGN PH	DRAWN BY AS	DART		DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED PH	APPROVED PH	DRAWING NO.	D412-664-243	REV. C SHEET 3 OF 3
DATE 06.10.27	TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE 1:1		

COPYRIGHT © 2001 BY DART AEROSPACE LTD.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.

Crosstube Bend Dimension Sheet



PART NUMBER: 0412 664 203

BATCH NUMBER: B30190

DRAWING: D412664243 REVISION: C

H: 24.37

1/2 SPAN: 53.72

TOTAL SPAN: 107.44

ANGLE: 50

QC 15: J

DATE: 07-01-17

QTY: 1

AA
07/01/17



HeathAir

INTERNATIONAL (1991) INC.

681 Ave. Lepine, Dorval, Québec H9P 1G3
Tél.: (514) 636-1000 • Fax: (514) 636-0031

W.O. N° 35629

A.M.O. Number: 46/90

NON-DESTRUCTIVE TESTING REPORT

AIRCRAFT / COMPONENT INFORMATION

REGISTRATION:

MODEL/TYPE:

SERIAL NUMBER:

TOTAL HR/LDG:

OPERATED BY:

BASED AT:

INSPECTION REQUIREMENTS

Carry out FPI of (10) cross tube (external surface) as per ASTM E-1417-05 and the Dart QSI 038, Section 4.1.1 (on file at client) - parts delivered to HeathAir.

Qty (1) P/N D212-664-101 S/N B27987

Qty (3) P/N D212-664-201 S/N's B27989, B29506 & B29531

Qty (6) P/N D412-664-203 S/N's B29105, B30187, B30188, B27262, B29104 & B30190

 RADIOGRAPHY ULTRASONIC PENETRANT MAGNETIC PARTICLE EDDY CURRENT

INSPECTION REPORT

Fluorescent penetrant inspection was performed in accordance with the above requirements on (10) cross tubes.

Note: A Level 3 penetrant was substituted for the requested Level 2 (3 is more sensitive)
Ardrox 970P25E Batch #04B503.

Two (2) cross tubes (P/N D212-664-201) FAILED inspection. Areas marked on cross tubes (S/N's B29506 & B29531). To be reinspected following repair.
Eight (8) cross tubes PASSED inspection.

THE MAINTENANCE DESCRIBED ABOVE HAS BEEN PERFORMED IN ACCORDANCE WITH
THE APPLICABLE STANDARDS OF AIRWORTHINESS

DATE January 23, 2007

INSPECTED BY: 

INSPECTION STAMP(S) Not Required

CUSTOMER INFORMATION

CUSTOMER: Dart Aerospace

P.O. NUMBER

2915

ADDRESS:

CONTACT NAME:

LABOUR	@	\$
MATERIALS	@	
TRAVEL EXPENSES	@	GST
HOTEL EXPENSES	@	PST

INVOICE NO. TOTAL \$